

## **Important Phylla, Classes and Orders**

### **Phylla:**

**Mollusca - Snails and Slugs**

**Annelida – Segmented Worms (earth worms)**

### **Arthropoda**

#### **Class –**

**Crustacea – Isopods (pillbugs, sowbugs) related to Crabs & Shrimp**

**Arachnida – Spiders, Ticks, Mites, Scorpions**

**Chilopoda – Centipedes**

**Dipoloda - Millipedes**

**Symphylan**

#### **Insecta**

#### **Insect Orders**

<b>Name</b>	<b>Phonic</b>	<b>Type of Wing</b>	<b>Example</b>
<b>Orthoptera</b>	<b>Orth-op-tura</b>	<b>straight wing</b>	<b>Grasshopper, Cricket</b>
<b>Isoptera</b>	<b>I-sop-tura</b>	<b>equal wing</b>	<b>Termite</b>
<b>Hemiptera</b>	<b>Hem-ip-tura</b>	<b>half wing</b>	<b>True Bugs Bedbugs, Stinkbugs Chinch Bugs</b>
<b>Homoptera</b>	<b>Home-op-tura</b>	<b>same wing</b>	<b>Aphid, Leafhopper</b>
<b>Coleoptera</b>	<b>Co-lee-op-tura</b>	<b>covered wing</b>	<b>Beetles, Weevils</b>
<b>Lepidoptera</b>	<b>Lep-ah-dop-tera</b>	<b>scaly wing</b>	<b>Butterflies, Moths</b>
<b>Hymenoptera</b>	<b>High-men-op-tura</b>	<b>membrane wing</b>	<b>Wasps, Bees,</b>

**Ants**

<b>Dermaptera</b>	<b>Der-map-tura</b>	<b>skin wing</b>	<b>Earwings</b>
<b>Diptera</b>	<b>Dip-tura</b>	<b>two wings</b>	<b>Flies, Mosquitoes, Gnats</b>
<b>Neuroptera</b>	<b>Nur-op-tura</b>	<b>nerve wing</b>	<b>Lacewings</b>
<b>Thysanoptera</b>	<b>Thigh-san-op-tura</b>	<b>fringe wing</b>	<b>Thrips</b>
<b>Siphonoptera</b>	<b>Si-phone-op-tura</b>	<b>sucking mouth part</b>	<b>Fleas</b>

<b>Odanata</b>	<b>Ode-o-nata</b>	<b>Toothed mouth part</b>	<b>Dragonflies, Damselflies</b>
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**New Orders**

<b>Blattodea</b>	<b>Blat-toe-de-ah</b>	<b>Cockroaches</b>
<b>Mantodea</b>	<b>Man-toe-de-ah</b>	<b>Mantises</b>

**ID by Mouth Parts:**

<b>Orthoptera</b>	<b>Chewing</b>	<b>Grasshopper</b>
<b>Hemiptera</b>	<b>Piercing, sucking</b>	<b>True bug</b>
<b>Lepidoptera</b>	<b>Coiled, siphon</b>	<b>Butterfly</b>
<b>Hymenoptera</b>	<b>Chewing, lapping</b>	<b>Wasp</b>
<b>Diptera</b>	<b>Sponging, piercing</b>	<b>Fly, Mosquito</b>




## Resources


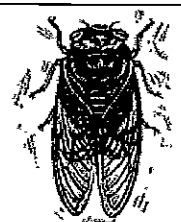








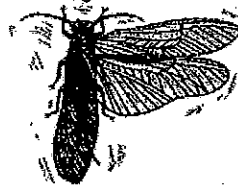
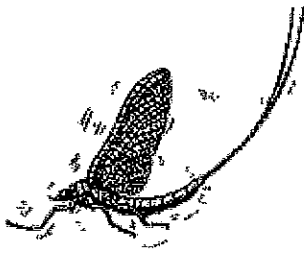
## Dichotomous Keys - Text Format.


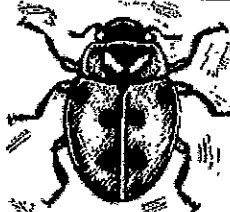
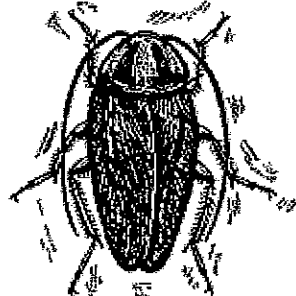


## Arthropods - Key A: Arthropods with Six Legs, with Well-Developed Wings.

**Tips:** Only adult arthropods are included, and certain uncommon orders are not included. To use a key, read both descriptions in a couplet (for instance, 1a and 1b). Decide which sounds most like your critter, and move to the next couplet indicated. Should you reach a dead-end, use the numbers in parentheses to backtrack until you reach a couplet that you felt unsure about, and try following the other path. Some orders are found more than once in the keys, because the arthropods occur in different forms.

STEP	FROM	CHARACTERS	ORDER / CLASS
1a		One pair of wings. . . . . go to 2	
1b		Two pairs of wings. . . . . go to 3	
2a	1a	Hind wings reduced to tiny knobs (halteres), tip of abdomen without 2-3 thread-like tails	 <b>DIPTERA</b> (Flies)
2b	1a	Hind wings not reduced to tiny knobs, tip of abdomen with 2-3 thread-like tails (caudal filaments)	 <b>EPHEMEROPTERA</b> (Mayflies)
3a	1b	Front and hind wings have similar texture. . . . . go to 4	
3b	1b	Front wings a rigid or leathery covering for clear hind wings. . . . . go to 14	
4a	3a	Wings covered with powdery scales, mouthparts usually a coiled tube (proboscis) for sucking	 <b>LEPIDOPTERA</b> (Moths / Butterflies)
4b	3a	Wings not covered with powdery scales, mouthparts not a coiled tube. . . . . go to 5	

5a	4b	Wings slope downwards (rooflike) from the center at rest. . . . . go to 6	
5b	4b	Wings not held rooflike at rest. . . . . go to 9	
6a	5a	Wings covered with hair	 <p><b>TRICHOPTERA</b> (Caddisflies)</p>
6b	5a	Hairless wings. . . . . go to 7	
7a	6b	Sucking mouthparts in the form of a rigid beak, often short and bristley antennae, body may look like a thorn	 <p><b>HOMOPTERA</b> (Hoppers)</p>
7b	6b	Mouthparts not in the form of a rigid beak, antennae not short and bristley, body never looks like a thorn. . . . . go to 8	
8a	7b	Wings with many cross veins	 <p><b>NEUROPTERA</b> (Lacewings)</p>
8b	7b	Wings without many cross veins	 <p><b>PSOCOPTERA</b> (Bark lice)</p>
9a	5b	Front and hind wings similar in size and shape. . . . . go to 10	
9b	5b	Front and hind wings not similar in size and shape. . . . . go to 12	
10a	9a	Antennae always short and bristley	 <p><b>ODONATA</b> (Dragonflies &amp; Damselflies)</p>

10b	9a	Antennae never short and bristley. . . . . go to 11	
11a	10b	Wings held flat over abdomen when at rest, last abdominal segment not enlarged, usually found in colonies	 <p><b>ISOPTERA</b> (Termites)</p>
11b	10b	Wings not held flat over abdomen when at rest, males with the last abdominal segment enlarged like a scorpion's stinger and held over the body, not found in colonies	 <p><b>MECOPTERA</b> (Scorpionflies)</p>
12a	9b	Body very soft, without a narrow "waist". . . . . go to 13	
12b	9b	Body not exceptionally soft, often with a narrow "waist"	 <p><b>HYMENOPTERA</b> (Bees &amp; Wasps)</p>
13a	12a	Hind wings wider than front wings, folded underneath like a fan	 <p><b>PLECOPTERA</b> (Stoneflies)</p>
13b	12a	Hind wings much smaller than front wings, not folded underneath like a fan	 <p><b>EPHEMEROPTERA</b> (Mayflies)</p>

14a	3b	Sucking mouthparts in the form of a rigid beak, front wings with clear tips ( <b>hemelytra</b> ), overlapping at rest, revealing a triangular panel on the back ( <b>scutellum</b> )	 <p><b>HETEROPTERA</b> (True Bugs)</p>
14b	3b	Chewing mouthparts, front wings without clear tips. . . . . go to 15	
15a	14b	Rigid front wings ( <b>elytra</b> ) meet in a straight line down the middle of the back	 <p><b>COLEOPTERA</b> (Beetles)</p>
15b	14b	Front wings not as above. . . . . go to 16	
16a	15b	Head visible from above. . . . . go to 17	
16b	15b	Head hidden from above by a hoodlike structure ( <b>pronotum</b> )	 <p><b>BLATTARIA</b> (Cockroaches)</p>
17a	16a	Front legs strong with prominent spines for grasping prey, hind legs long and slender	 <p><b>MANTODEA</b> (Mantids)</p>
17b	16a	Front legs without spines or with weak spines, the femora of the hind legs are enlarged for jumping	 <p><b>ORTHOPTERA</b> (Grasshoppers &amp; Crickets)</p>